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(54) **SYSTEM FOR ALLOCATING COMPUTING RESOURCES OF DISTRIBUTED COMPUTER SYSTEM WITH TRANSACTION MANAGER**

(75) Inventors: **Steven Neiman**, Staten Island, NY (US); **Roman Sulzhyk**, New York, NY (US)

(73) Assignee: **JPMorgan Chase & Co.**, New York, NY (US)

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This patent is subject to a terminal disclaimer.

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(58) **Field of Classification Search** 718/101, 718/104; 709/203; 714/100
See application file for complete search history.

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Primary Examiner—Van H Nguyen
Assistant Examiner—Kenneth Tang
(74) *Attorney, Agent, or Firm*—Lowenstein Sandler PC

(57) **ABSTRACT**

In one aspect, the present invention features a system including a local computing device in communication with a distributed computing system, the local computing device configured to perform computations for a first portion of a computer software application and to send a second portion of the application for computation on the distributed computing system. According to such an aspect, the distributed computing system may include a node computing device configured to perform computations for the second portion of the application, a persistent data storage queue in communication with the node computing device, the persistent data storage configured to store the second portion of the application, wherein a minimum availability of the distributed computing system is defined by an availability of the persistent data storage, and a compute function deployed on the distributed computing system, the second portion of the application including a job with an input, wherein the input has a task to be performed by the compute function, and wherein the input need not be supplied to the job at a time of job creation.

6 Claims, 13 Drawing Sheets